Docket No. 1204.45684X00

Serial No. NEW

December 9, 2005

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of

claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) AnA adhesive film having at least an adhesive layer,

wherein the adhesive layer contains (A) a polyimide resin having a SP value of 10.0 to

11.0 (cal/cm³) $^{1/2}$ and (B) an epoxy resin, and a tan δ peak temperature is -20 to 60°C

and a flow amount is 100 to 1500 μm .

2. (Original) The adhesive film according to claim 1, wherein the (B) epoxy

resin contains a tri- or more functional epoxy resin and/or an epoxy resin which is solid

at room temperature.

3. (Original) The adhesive film according to claim 1, wherein the (B) epoxy

resin contains 10 to 90% by weight of a tri- or more functional epoxy resin, and 10 to

90% by weight of an epoxy resin which is liquid at room temperature.

4. (Currently amended) The adhesive film according to claim 1 any one of

claims 1 to 3, wherein 1 to 50 parts by weight of the (B) epoxy resin is contained relative

to 100 parts by weight of the (A) polyimide resin.

5. (Currently amended) The adhesive film according to claim 1 any one of

claims 1 to 5, wherein as the (A) polyimide resin, a polyimide resin obtained by reacting

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an acid dianhydride satisfying the condition where a difference between a heat

generation initiating temperature and a heat generation peak temperature by means of

DSC is 10°C or smaller, and diamine is contained at 50% by weight or more of a total

polyimide resin.

6. (Currently amended) The adhesive film according to claim 1 any one of

claims 1 to 5, wherein (C) an epoxy resin curing agent is further contained.

7. (Original) The adhesive film according to claim 6, wherein the (C) epoxy

resin curing agent is a phenol-based compound having 2 or more hydroxy groups in a

molecule and having a number average molecular weight of 400 to 1500.

8. (Original) The adhesive film according to claim 6, wherein the (C) epoxy

resin curing agent is a naphthol-based compound having 3 or more aromatic rings in a

molecule or a trisphenol-based compound.

9. (Currently amended) The adhesive film according to claim 7-or 8, wherein

an equivalent ratio of an epoxy equivalent of the (B) epoxy resin and an OH equivalent

of the (C) epoxy resin curing agent is 0.95 to 1.05:0.95 to 1.05.

10. (Currently amended) The adhesive film according to claim 1 any one of

claims 1 to 9, wherein the (A) polyimide resin is a polyimide resin obtained by reacting a

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tetracarboxylic acid dianhydride, and diamine containing 1% by mol or more of total diamine of aliphatic etherdiamine represented by the following formula (I):

$$H_2N - Q^1 + Q^2 + Q^3 - NH_2$$
 (I)

(wherein Q¹, Q² and Q³ each represent independently an alkylene group having 1 to 10 carbon atoms, and m represents an integer of 2 to 80).

11. (Currently amended) The adhesive film according to <u>claim 1 any one of claims 1 to 9</u>, wherein the (A) polyimide resin is a polyimide resin obtained by reacting a tetracarboxylic acid dianhydride, and diamine containing 1 to 90% by mol of total diamine of aliphatic etherdiamine represented by the following formula (I):

$$H_2N - Q^1 + Q^2 + Q^3 - NH_2$$
 (1)

(wherein Q¹, Q² and Q³ each represent independently an alkylene group having 1 to 10 carbon atoms, and m represents an integer of 2 to 80),

0 to 99% by mol of total diamine of aliphatic diamine represented by the following formula (II):

$$H_2N - \left(CH_2\right) - NH_2$$
 (II)

(wherein n represents an integer of 5 to 20),

and 0 to 99% by mol of total diamine of siloxanediamine represented by the following formula (III):

(wherein Q⁴ and Q⁹ each represent independently an alkylene group having 1 to 5 carbon atoms or an optionally substituted phenylene group, Q⁵, Q⁶, Q⁷ and Q⁸ each represent independently an alkyl group having 1 to 5 carbon atoms, a phenyl group or a phenoxy group, and p represents an integer of 1 to 5).

- 12. (Currently amended) The adhesive film according to <u>claim 1</u> any one of claims 1 to 11, wherein the (A) polyimide resin is a polyimide resin obtained by reacting a tetracarboxylic acid dianhydride containing 50% by mol of total tetracarboxylic acid dianhydride of tetracarboxylic acid dianhydride containing no ester linkage, and diamine.
- 13. (Original) The adhesive film according to claim 12, wherein the tetracarboxylic acid dianhydride containing no ester linkage is tetracarboxylic acid dianhydride represented by the following formula (IV):

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14. (Currently amended) The adhesive film according to <u>claim 2</u>any one of claims 2 to 13, wherein the tri- or more functional epoxy resin is a novolak-type epoxy resin represented by the following formula (VII);

(wherein Q¹⁰, Q¹¹ and Q¹² each represent independently hydrogen, an alkylene group having 1 to 5 carbon atoms, or an optionally substituted phenylene group, and r represents an integer of 1 to 20).

- 15. (Currently amended) The adhesive film according to <u>claim 1 any one of claims 1 to 14</u>, which further contains (D) filler.
- 16. (Original) The adhesive film according to claim 15, wherein the (D) filler is insulating filler.

- 17. (Currently amended) The adhesive film according to claim 15-or-16, wherein an average particle diameter of the (D) filler is 10 μ m or smaller, and a maximum particle diameter of the (D) filler is 25 μ m or smaller.
- 18. (Currently amended) The adhesive film according to <u>claim 15</u>any one of claims 15 to 17, wherein a content of the (D) filler is 1 to 50% by volume.
- 19. (Currently amended) The adhesive film according to <u>claim 1</u> any one of <u>claims 1 to 18</u>, wherein a difference between surface energy of the adhesive film and surface energy of an organic substrate equipped with a solder resist material is 10mN/m or smaller.
- 20. (Currently amended) The adhesive film according to <u>claim 1 any one of claims 1 to 19</u>, wherein at a stage where the adhesive is laminated on a silicon wafer at 80°C, a 90° peeling force at 25°C to the silicon wafer is 5N/m or larger.
- 21. (Currently amended) An adhesive sheet, characterized in that a substrate layer, a self-adhesive layer, and the adhesive film layer as claimed in <u>claim 1</u> any one of claims 1 to 20 are formed in this order.
- 22. (Original) The adhesive sheet according to claim 21, wherein the self-adhesive layer is a radiation curing-type self-adhesive layer.

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23. (Currently amended) A semiconductor <u>devicedevise</u> having a structure in which at least one of (1) a semiconductor chip and a semiconductor-carrying support member, and (2) semiconductor chips are adhered via the adhesive film as claimed in

claim 1 any one of claims 1 to 20.

- 24. (New) The adhesive film according to claim 8, wherein an equivalent ratio of an epoxy equivalent of the (B) epoxy resin and an OH equivalent of the (C) epoxy resin curing agent is 0.95 to 1.05:0.95 to 1.05.
- 25. (New) The adhesive film according to claim 16, wherein an average particle diameter of the (D) filler is 10 μ m or smaller, and a maximum particle diameter of the (D) filler is 25 μ m or smaller.
- 26. (New) The adhesive film according to any one of claims 16, wherein a content of the (D) filler is 1 to 50% by volume.
- 27. (New) An adhesive sheet, characterized in that a substrate layer, a self-adhesive layer, and the adhesive film layer as claimed in claim 6 are formed in this order.
- 28. (New) The adhesive sheet according to claim 27, wherein the self-adhesive layer is a radiation curing-type self-adhesive layer.

- 29. (New) An adhesive sheet, characterized in that a substrate layer, a self-adhesive layer, and the adhesive film layer as claimed in claim 15 are formed in this order.
- 30. (New) The adhesive sheet according to claim 29, wherein the self-adhesive layer is a radiation curing-type self-adhesive layer.
- 31. (New) A semiconductor device having a structure in which at least one of (1) a semiconductor chip and a semiconductor-carrying support member, and (2) semiconductor chips are adhered via the adhesive film as claimed in claim 6.
- 32. (New) A semiconductor device having a structure in which at least one of (1) a semiconductor chip and a semiconductor-carrying support member, and (2) semiconductor chips are adhered via the adhesive film as claimed in claim 15.